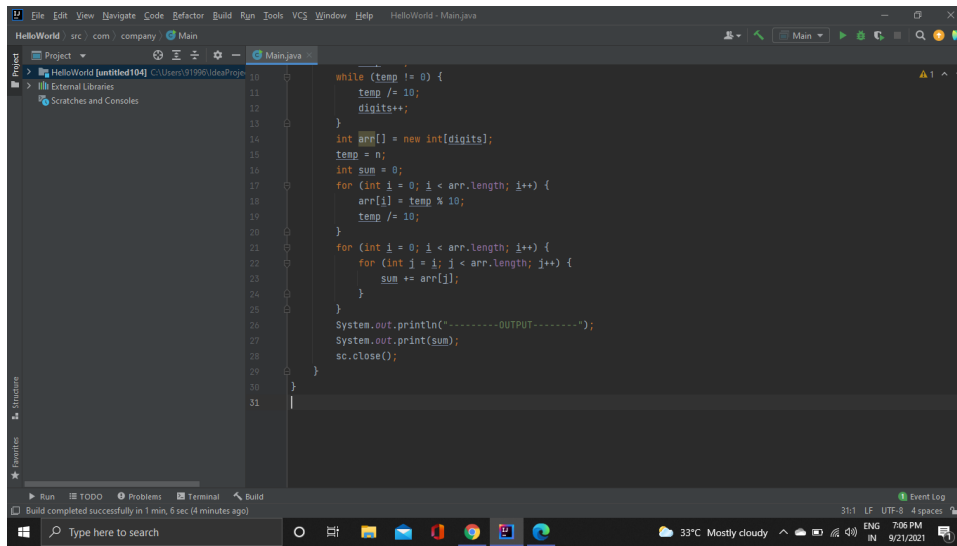


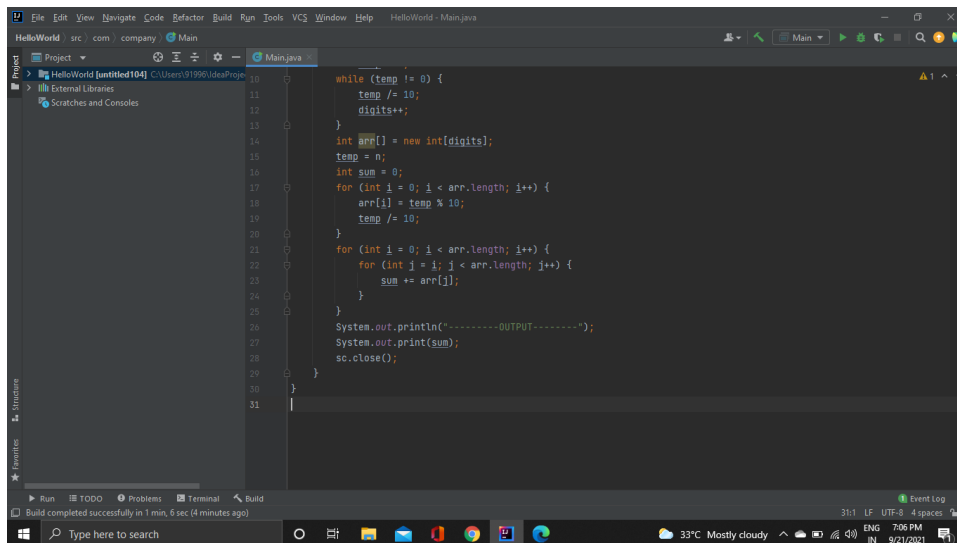
Program : 1



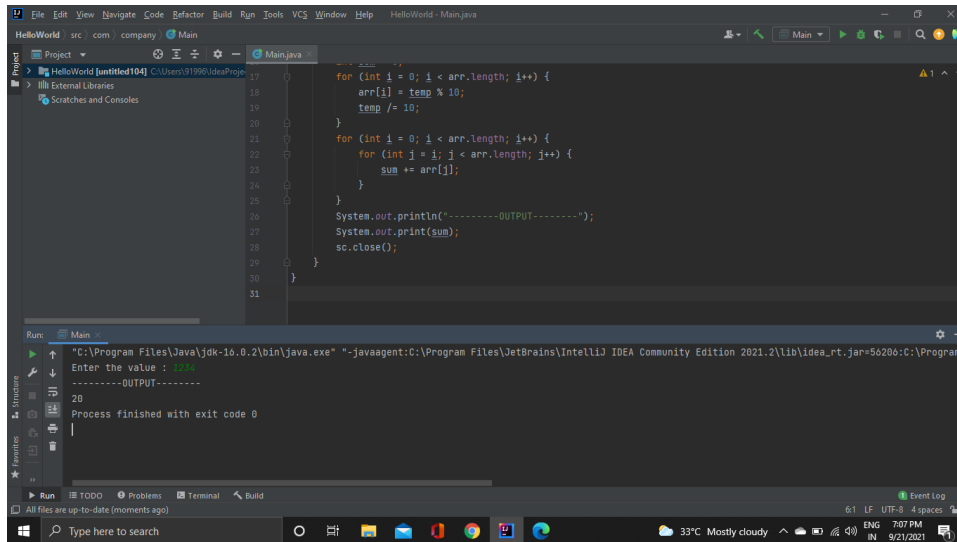
The screenshot shows an IDE window titled 'HelloWorld - Main.java'. The code is as follows:

```
10 while (temp != 0) {
11     temp /= 10;
12     digits++;
13 }
14 int arr[] = new int[digits];
15 temp = n;
16 int sum = 0;
17 for (int i = 0; i < arr.length; i++) {
18     arr[i] = temp % 10;
19     temp /= 10;
20 }
21 for (int i = 0; i < arr.length; i++) {
22     for (int j = i; j < arr.length; j++) {
23         sum += arr[j];
24     }
25 }
26 System.out.println("-----OUTPUT-----");
27 System.out.print(sum);
28 sc.close();
29 }
30 }
31 }
```

The IDE interface includes a Project view on the left, a Run toolbar at the bottom, and a status bar at the very bottom showing 'Build completed successfully in 1 min, 6 sec (4 minutes ago)'.



This screenshot is identical to the one above, showing the same Java code in the IDE. The code calculates the sum of digits of a number 'n' by first determining the number of digits, then storing each digit in an array, and finally summing all elements of the array. The IDE status bar indicates a successful build.

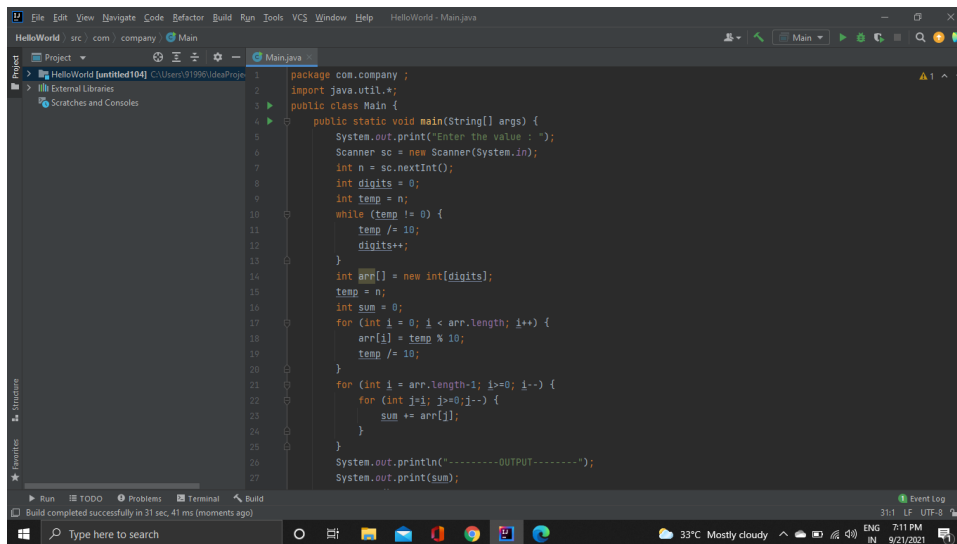


```
File Edit View Navigate Code Refactor Build Run Tools VCS Window Help HelloWorld - Main.java
HelloWorld src / com / company Main
Project
  HelloWorld [untitled104] C:\Users\91996\IdeaProjects
  External Libraries
  Scratches and Consoles
Main.java
  17 for (int i = 0; i < arr.length; i++) {
  18     arr[i] = temp % 10;
  19     temp /= 10;
  20 }
  21 for (int i = 0; i < arr.length; i++) {
  22     for (int j = i; j < arr.length; j++) {
  23         sum += arr[j];
  24     }
  25 }
  26 System.out.println("-----OUTPUT-----");
  27 System.out.print(sum);
  28 sc.close();
  29 }
  30 }
  31 }

Run: Main
C:\Program Files\Java\jdk-16.0.2\bin\java.exe -javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.2\lib\idea_rt.jar=56206:C:\Program
Enter the value : 20
-----OUTPUT-----
20
Process finished with exit code 0

Run TODO Problems Terminal Build
All files are up-to-date (moments ago)
6.1 LF UTF-8 4 spaces
ENG 7:07 PM 9/21/2021
33°C Mostly cloudy
```

Program : 2



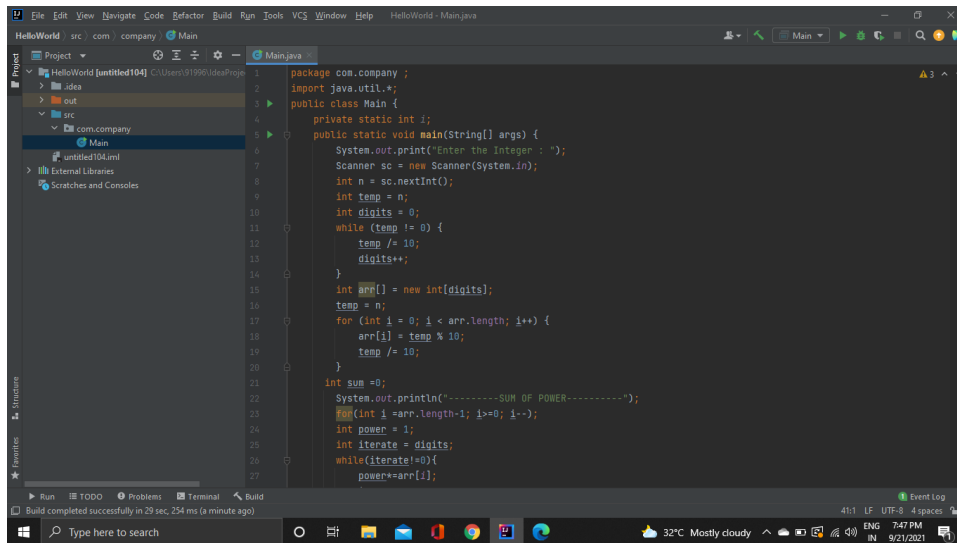
```
File Edit View Navigate Code Refactor Build Run Tools VCS Window Help HelloWorld - Main.java
HelloWorld src / com / company Main
Project
  HelloWorld [untitled104] C:\Users\91996\IdeaProjects
  External Libraries
  Scratches and Consoles
Main.java
  1 package com.company ;
  2 import java.util.*;
  3 public class Main {
  4     public static void main(String[] args) {
  5         System.out.print("Enter the value : ");
  6         Scanner sc = new Scanner(System.in);
  7         int n = sc.nextInt();
  8         int digits = 0;
  9         int temp = n;
  10         while (temp != 0) {
  11             temp /= 10;
  12             digits++;
  13         }
  14         int arr[] = new int[digits];
  15         temp = n;
  16         int sum = 0;
  17         for (int i = 0; i < arr.length; i++) {
  18             arr[i] = temp % 10;
  19             temp /= 10;
  20         }
  21         for (int i = arr.length-1; i>=0; i--) {
  22             for (int j=i; j>=0; j--) {
  23                 sum += arr[j];
  24             }
  25         }
  26         System.out.println("-----OUTPUT-----");
  27         System.out.print(sum);
  28     }
  29 }

Run TODO Problems Terminal Build
Build completed successfully in 31 sec, 41 ms (moments ago)
31:1 LF UTF-8
ENG 7:11 PM 9/21/2021
33°C Mostly cloudy
```

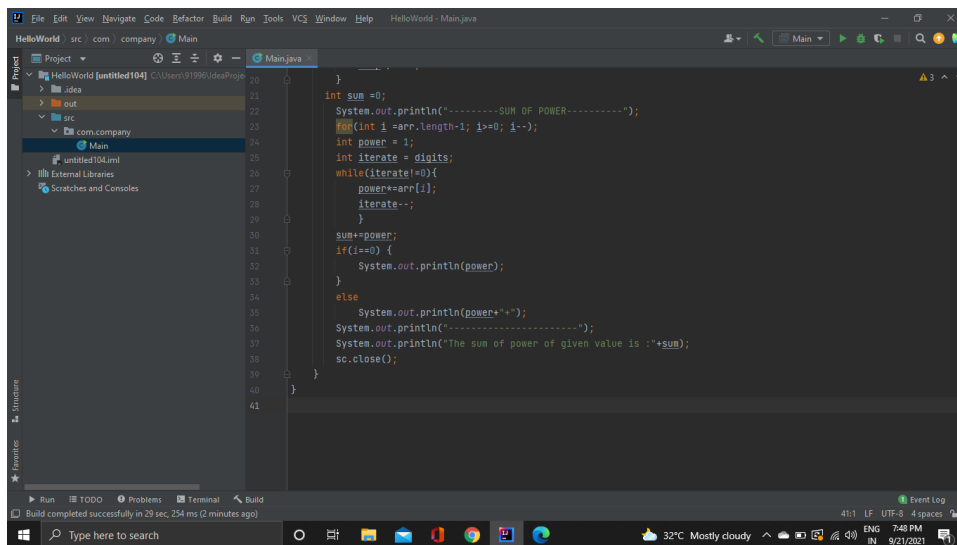
```
File Edit View Navigate Code Refactor Build Run Tools VCS Window Help HelloWorld - Main.java
HelloWorld src / com / company / Main
Project
  HelloWorld [untitled104] C:\Users\91990\IdeaProj...
  External Libraries
  Scratches and Consoles
Main.java
10 while (temp != 0) {
11     temp /= 10;
12     digits++;
13 }
14 int arr[] = new int[digits];
15 temp = n;
16 int sum = 0;
17 for (int i = 0; i < arr.length; i++) {
18     arr[i] = temp % 10;
19     temp /= 10;
20 }
21 for (int i = arr.length-1; i >= 0; i--) {
22     for (int j=i; j>=0;j--) {
23         sum += arr[j];
24     }
25 }
26 System.out.println("-----OUTPUT-----");
27 System.out.print(sum);
28 sc.close();
29 }
30 }
31 }
Run TODO Problems Terminal Build
Build completed successfully in 31 sec, 41 ms (a minute ago)
31:1 LF UTF-8
ENG 7:12 PM
IN 9/21/2021
```

```
File Edit View Navigate Code Refactor Build Run Tools VCS Window Help HelloWorld - Main.java
HelloWorld src / com / company / Main
Project
  HelloWorld [untitled104] C:\Users\91990\IdeaProj...
  External Libraries
  Scratches and Consoles
Main.java
20 }
21 for (int i = arr.length-1; i >= 0; i--) {
22     for (int j=i; j>=0;j--) {
23         sum += arr[j];
24     }
25 }
26 System.out.println("-----OUTPUT-----");
27 System.out.print(sum);
28 sc.close();
29 }
30 }
31 }
Run Main
"C:\Program Files\Java\jdk-10.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.2\lib\idea_rt.jar=55505:C:\Program
Enter the value :
-----OUTPUT-----
30
Process finished with exit code 0
Run TODO Problems Terminal Build
All files are up-to-date (moments ago)
6:1 LF UTF-8 4 spaces
ENG 7:13 PM
IN 9/21/2021
```

Program : 3



```
1 package com.company ;
2 import java.util.*;
3 public class Main {
4     private static int i;
5     public static void main(String[] args) {
6         System.out.print("Enter the Integer : ");
7         Scanner sc = new Scanner(System.in);
8         int n = sc.nextInt();
9         int temp = n;
10        int digits = 0;
11        while (temp != 0) {
12            temp /= 10;
13            digits++;
14        }
15        int arr[] = new int[digits];
16        temp = n;
17        for (int i = 0; i < arr.length; i++) {
18            arr[i] = temp % 10;
19            temp /= 10;
20        }
21        int sum = 0;
22        System.out.println("-----SUM OF POWER-----");
23        for (int i = arr.length-1; i>=0; i--){
24            int power = 1;
25            int iterate = digits;
26            while(iterate!=0){
27                power*=arr[i];
28            }
29            sum+=power;
30            if(i!=0) {
31                System.out.println(power);
32            }
33            else
34                System.out.println(power+"*");
35            System.out.println("-----");
36            System.out.println("The sum of power of given value is : "+sum);
37            sc.close();
38        }
39    }
40 }
41 }
```



```
1 package com.company ;
2 import java.util.*;
3 public class Main {
4     private static int i;
5     public static void main(String[] args) {
6         System.out.print("Enter the Integer : ");
7         Scanner sc = new Scanner(System.in);
8         int n = sc.nextInt();
9         int temp = n;
10        int digits = 0;
11        while (temp != 0) {
12            temp /= 10;
13            digits++;
14        }
15        int arr[] = new int[digits];
16        temp = n;
17        for (int i = 0; i < arr.length; i++) {
18            arr[i] = temp % 10;
19            temp /= 10;
20        }
21        int sum = 0;
22        System.out.println("-----SUM OF POWER-----");
23        for (int i = arr.length-1; i>=0; i--){
24            int power = 1;
25            int iterate = digits;
26            while(iterate!=0){
27                power*=arr[i];
28                iterate--;
29            }
30            sum+=power;
31            if(i!=0) {
32                System.out.println(power);
33            }
34            else
35                System.out.println(power+"*");
36            System.out.println("-----");
37            System.out.println("The sum of power of given value is : "+sum);
38            sc.close();
39        }
40    }
41 }
```

